



Pharmacia & Upjohn Caribe Incorporated

EPA ID Number: PRD090398074

Other (Former) Names of Site

Formerly the Upjohn Manufacturing Company (UMC). On November 30, 1996 UMC transferred its operating assets to Upjohn Caribe, Inc. and became known as Pharmacia & Upjohn Caribe, Inc. (PUCI) but remained a wholly owned subsidiary of UMC.

Site Description

Pharmacia and Upjohn Caribe, Inc. (PUCI) is located on the north coast of Puerto Rico, in the Sabana Hoyos Ward, which is approximately 30 miles from the San Juan metropolitan area. The facility is located in an area zoned as "industrial" (IL-2) by the local Planning Board. The size of the property site is 247.10 acres located at 275 to 330 feet above mean sea level. Merck Sharp & Dohme Chemical - Arecibo is located one mile from the PUCI facility. The surrounding area is dedicated to agriculture and cattle ranching.

Most of the facility has manufactured pharmaceuticals since 1973. The initial production processes included the formulation of raw materials, fermentation, extraction, crystallization, purification, and chemical synthesis of antibiotics; manufacturing and packaging of bulk and finished goods. Four extraction wells provide water for all manufacturing processes.

The PUCI facility generates waste in the chemical synthesis of antibiotics and other chemicals, packaging of liquid Clindamycin Topical solution, pharmaceutical manufacturing of analgesics, pharmaceutical packaging of medicines, chemical laboratories and parts cleaning machines.

Site Responsibility

Cleanup at this site is being addressed by the U.S. Environmental Protection Agency (EPA), under authority of the Resource Conservation and Recovery Act (RCRA). However, the Puerto Rico Environmental Quality Board (EQB) participates with EPA in cleanup decision-making and oversight. This fact sheet addresses cleanup under RCRA. In December 1991, EPA granted the facility a permit for hazardous waste treatment, storage and disposal. The permit included a requirement that PUCI cleanup

contaminated areas of the facility. The cleanup provision outlined four specific activities to be performed: RCRA Facility Investigation (RFI), Interim Measures (IM), Corrective Measure Study (CMS) and Corrective Measure Implementation (CMI).

Threats and Contaminants

Contamination at the Pharmacia and Upjohn Caribe, Inc. (PUCI) site occurred from former waste management practices that resulted in leaks from process and storage areas. The RCRA Facility Investigation (RFA) completed in 1991 identified contaminated areas at the site including a 1987 spill from PUCI's underground storage tanks and 26 Solid Waste Management Units (SWMUs). The spilled liquid hazardous waste consisted of carbon tetrachloride, acetonitrile, and chloroform, and contaminated soil and groundwater.

CLEANUP APPROACH

Cleanup Status/Corrective Action

The site is being addressed by Pharmacia & Upjohn Caribe, Inc. under EPA oversight, in two measures: Interim Corrective Measures (ICM) and long-term corrective measures directed at clean up of the entire site.

Response Action Status

Interim Corrective Measures

Interim Corrective Measures implemented at the site included removal of onsite "hot spots" of contaminated soils and sediments/sludges which act as sources of contamination to the groundwater. Interim Measures were taken to first address the most serious areas of contamination and threats to groundwater.

Entire Site

The 1991 Resource Conservation and Recovery Act (RCRA) permit, which was renewed in 2000, requires PUCI to conduct RCRA Facility Investigation (RFI), Corrective Measure Study (CMS), Corrective Measure Implementation (CMI) and ultimately cleanup the contamination at the entire facility.

An extensive site-wide RCRA Facility Investigation (RFI) has identified the extent of contamination. Corrective action is being undertaken to address the contamination as follows:

- most contaminated areas of the facility were remediated by excavation of soils resulting in "No Further Action" status for the remediated areas;
- continuation of the groundwater remediation activities under the requirements of

the 1989 Order issued by EPA under the authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) which has been very effective in reducing the groundwater contamination;

- installation and implementation of soil vapor extraction (SVE) system to remove the residual volatile organic compounds from the contaminated soils.

Cleanup Progress

The only remaining area of soil contamination is presently being addressed for cleanup. In September 2002 Pharmacia & Upjohn Caribe, Inc. (PUCI) modified the soil vapor extraction (SVE) system to enhance the efficiency of the SVE system to remove the residual volatile organic compounds from the contaminated soils. PUCI is required to submit a monthly progress report to EPA on the performance of the modified SVE system.

Permit Status

PUCI's RCRA permit for its above-ground tanks and storage system expired in December 1996. The permit was administratively extended for about four years and then renewed in September 2000 for a period of 10 years.



Above-ground tank



Containers storage

Site Repository

Copies of supporting technical documents and correspondence cited in the fact sheet are available for public review at the following location:

U.S. Environmental Protection Agency, Region 2
RCRA Records Center
290 Broadway, 15th Floor, Room 1538
New York, New York 10007-1866
Telephone: (212) 637-3043